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Common Painkiller Is Causing Many Heart Attacks

STORY AT-A-GLANCE

- Nearly 25 million American adults suffer from pain on a daily basis, many of whom reach for over-the-counter (OTC) nonsteroidal anti-inflammatory (NSAID) drugs to ease their discomfort
- Research shows a high risk of heart attack associated with diclofenac, an OTC NSAID researchers strongly recommend become a prescription drug; data revealed ibuprofen and naproxen increased heart attack risk 30 percent greater than taking no drug
- Risks associated with NSAIDs include gastrointestinal bleeding, hearing loss, miscarriage and increased risk of bone loss
- Consider using several natural strategies to reduce inflammation and pain without associated life-altering side effects, such as ginger, curcumin, astaxanthin and severely limiting sugar and grains

By Dr. Mercola

Nearly 25 million American adults suffer from pain on a daily basis and 23 million report experiencing severe pain.[1] In fact, pain affects more Americans than diabetes, heart disease and cancer combined and is cited as the most common reason Americans access health care.

Pain is a major contributor to health care costs and a leading cause of disability.[2] The World Health Organization (WHO) estimates at least half adult population in the world experienced at least one headache in the past year.[3]

In an effort to alleviate pain, many turn to using nonsteroidal anti-inflammatory medications (NSAIDs)often prescribed after an injury, to treat menstrual cramps and to reduce fever or headache. In the U.S., nearly 70 million prescriptions are written and 30 billion doses are consumed when over-the-counter (OTC) NSAIDs are included.[4]

Although they may appear innocuous as they are sold in local convenience stores, by conservative estimates, over 105,000 people are hospitalized every year from side effects of these drugs and over 16,000 died.[5] Long-term side effects from NSAIDs are varied, but research demonstrates short-term use significantly increases your risk of heart attack.[6]

OTC Painkiller Increases Your Risk of Heart Attack

A recent study published in BMJ examined cardiovascular risk in individuals taking the NSAID diclofenac (marketed in the U.S. under the names Voltarol or Voltaren) compared against other traditional NAIDs.[7] Danish researchers used 252 cohort studies mimicking

the design strategy, which included more than 6.3 million adults who had at least one year of continuous prescription records.

They analyzed the data to evaluate the risk of major adverse cardiovascular events occurring within 30 days of first taking diclofenac, naproxen, ibuprofen or paracetamol.[8] The team, led by Morten Schmidt, Ph.D., at Aarhus University Hospital in Denmark, concluded adverse event rates in those taking diclofenac were 50 percent higher than in those who took no NSAIDs.[9]

Documented adverse events included atrial fibrillation, ischemic stroke, heart failure and myocardial infarction. The results of the study prompted the researchers to make strong recommendations for clinical use and future study:[10]

"It is time to acknowledge the potential health risk of diclofenac and to reduce its use. Diclofenac should not be available over the counter, and when prescribed, should be accompanied by an appropriate front package warning about its potential risks.

Moreover, the choice to use diclofenac as the reference group to provide evidence of safety of selective COX-2 inhibitors represents a potential flaw in safety trials.

Future trials should instead use low dose ibuprofen (≤1200 mg/day) or naproxen (≤500 mg/day) as comparators. In conclusion, our data support that initiation of diclofenac poses a cardiovascular health risk, both compared with no use, paracetamol use, and use of other traditional NSAIDs."

When the results were compared against ibuprofen and naproxen the researchers found those medications increased the risk of cardiovascular events 30 percent over those who did not take the medications. The results of this study confirm those of previous studies also finding those taking naproxen and ibuprofen at higher risk of having a heart attack.[11]

Despite FDA Warnings Use of NSAIDs Continues to Rise

In 2005 the FDA[12] asked manufacturers of OTC NSAIDs to revise labeling on their packages to provide more specific information about potential cardiovascular and gastrointestinal risks. The labels were also to remind patients to limit dose and duration of treatment as these medications were not meant to be used long-term.

In July 2015, the FDA strengthened those warnings based on a comprehensive review of safety information and required updates on drug labels of all prescription NSAIDs, saying:[13]

"The risk of heart attack and stroke with NSAIDs, either of which can lead to death, was first described in 2005 in the Boxed Warning and Warnings and Precautions sections of the prescription drug labels.

Since then, we have reviewed a variety of new safety information on prescription and OTC NSAIDs, including observational studies, a large combined analysis of clinical trials, and other scientific publications."

Despite these warnings, the number of prescribed NSAIDs or OTC purchases has not abated. The initial warning from the FDA came shortly after Merck voluntarily pulled Vioxx, an NSAID COX-2 inhibitor, off the shelves. Of the 4 million Americans who had taken Vioxx prior to the recall, it's estimated the drug caused 140,000 heart attacks resulting in an estimated 60,000 deaths.[14]

Although some believe taking NSAIDs for a short period of time does not increase your risk,[15]researchers found an increased risk just days after starting the drugs.[16] Using data from several large studies, analysis showed those who took NSAIDs for one week had a significantly higher risk of having a heart attack, with the highest risk occurring in those taking them for a month.

Interestingly, in this study, the risk did not appear to increase further after 30 days. The researchers theorized this occurred as those who were most vulnerable to the effects of the drug would have experienced heart problems within the first 30 days.

After adjustments for potential factors connected to heart disease such as diabetes, cholesterol levels and previous history of heart disease, the link remains significant. Although this study confirmed selective COX-2 inhibitors did trigger heart problems, it also demonstrated traditional NSAIDs, such as ibuprofen, carried similar risks.[17]

How NSAIDs Work

OTC NSAIDs include aspirin, ibuprofen and naproxen. All NSAIDs work by inhibiting cyclooxygenase enzymes (COX), which the body uses to create prostaglandins. There are two types of COX enzymes, COX-1 and COX-2. OTC NSAID medications target both, but prescription NSAIDs are selective COX-2 inhibitors.

Blocking COX-2 enzymes reduces the production of prostaglandins, chemicals that promote inflammation, pain and fever. However, prostaglandins also protect the lining of the stomach and intestines from the damaging effects of acid.[18]

Used long-term, OTC NSAIDs may result in erosive gastritis leading to an intestinal bleeding, or even perforation. Selective COX-2inhibitors were developed to reduce this specific side effect. The only COX-2 inhibitor currently left on the market in the U.S. is Celebrex (celecoxib). The remaining COX-2 inhibitors were removed from the U.S. including:[19]

- **Vioxx (rofecoxib)** — Withdrawn in 2004 following documented cardiovascular risks
- **Bextra (valdecoxib)** — Withdrawn from the market in 2005 due to cardiovascular risks

- **Prexige (lumiracoxib)** — Withdrawn after concerns of severe liver damage
- **Arcoxia (etoricoxib)** — Available in many countries but not the U.S.
- **Dynastat (parecoxib)** — An injectable medication not available in the U.S.

More Life-Altering Risks Associated With NSAIDs

The reduction and the production of prostaglandins increases the risk of gastrointestinal bleeding. Another is hearing loss. One study suggested taking aspirin, acetaminophen or ibuprofen two or more times a week led to hearing loss, especially in younger men.[20]

Data from the Nurse's Health Study, which involved data from more than 55,000 women, found those who regularly used NSAIDs or acetaminophen over six years had a 9 to 10 percent greater risk of hearing loss than in the decade before.[21] Lead author of the study, Dr. Gary Curhan at Brigham and Women's Hospital commented:[22]

"I worry that people think NSAIDs and acetaminophen are completely safe, and that they don't need to think about their potential [side effects]. But particularly for people who are taking them for chronic pain, I try to encourage them to look at why they are having the pain, not what they can take to try to treat the pain."

Women in their childbearing years should also be aware that NSAIDs taken around the time of conception or early in the pregnancy significantly increases the risk of miscarriage in the first eight weeks.[23] Reducing prostaglandin production with NSAIDs leads to difficulty with implantation and raises the risk of miscarriage.

Since the drug reduces inflammation and pain, some people use them before or after a particularly difficult workout or long run to reduce inflammation in the muscles and joints. However, a study by a professor of kinesiology at the University of Saskatchewan found those who used ibuprofen immediately after their exercise experienced more bone loss than those who did not use drugs.[24]

Prostaglandins help to prevent bone loss or build bone. Weight training can boost prostaglandin production, which can prevent bone loss. When NSAIDs are taken, it inhibits the release of prostaglandins canceling any beneficial effect on the bone from weight training.

Safer Pain Relief Alternatives You May Use at Home

Much of the pain relief afforded by ibuprofen and other NSAIDs is a reduction in inflammation. However, there are safer alternatives to reduce inflammation that do not involve drugs. Consider seeking the help of a pain specialist familiar with alternative treatments as they can help relieve pain in the short term while identifying the underlying cause.

Pain is your body's way of communicating something is wrong, and if you suffer severe pain or struggle with chronic pain, it can quickly sideline your life. Whether you experience a short-term injury or suffer from chronic pain, it is vital you identify the cause.

When used cautiously and correctly, prescription pain relievers have their place, but they become dangerous when relied upon on a daily basis. For lasting relief, most people find they need more than one modality to reduce inflammation in their body, including making dietary changes. This is a process of trial and error to find what combination works best for you.

Acupuncture — An estimated 3.5 million Americans use acupuncture for relief from pain associated with a number of physical conditions, including fibromyalgia, migraine headaches, back pain or injuries. This therapeutic technique has been used for thousands of years to rebalance your body. Read more about it in my previous article, "All About Acupuncture and How It Works."

Processed foods and sugar — Processed foods not only contain sugar and additives but are also loaded with omega-6 fats, upsetting the balance of omega-3 to omega-6 ratio. This in turn contributes to inflammation, a key factor in most pain.
Sugar, especially fructose, should be avoided and eliminated as it raises your insulin and leptin levels, one of the most profound stimulators of inflammatory prostaglandin production. This is why eliminating sugar and grains is so important to controlling pain.

Vitamin D — Optimizing your production of vitamin D by getting appropriate sun exposure will work through a variety of different mechanisms to reduce your pain.

Emotional Freedom Techniques (EFT) — EFT may help reduce pain and discomfort by reducing stress.

Omega-3 fats — The fats contained in animal-based omega-3, EPA and DHA, have demonstrated a reduction in inflammation and benefit in pain relief in many animal and clinical studies. Your best food sources include mackerel, herring, anchovies and wild-caught Alaskan salmon. Consider supplementing with high quality krill oil if you don't include these foods in your diet.

Cayenne cream — Also called capsaicin cream, this spice comes from dried hot peppers. It alleviates pain by depleting the body's supply of substance P, a chemical component of nerve cells transmitting pain signals to your brain.

Cetyl Myristoleate (CMO) — An oil, found in fish and dairy butter, it acts as a "joint lubricant" and an anti-inflammatory. It is available as a topical preparation as well.

Evening primrose, black currant and borage oils — These oils contain the fatty acid gamma-linolenic acid (GLA), which is useful for treating arthritic pain.

Bromelain — A protein-digesting enzyme, found in pineapples, is a natural anti-inflammatory. It can be taken in supplement form, but eating fresh pineapple may also be helpful. Keep in mind most of the bromelain is found within the core of the pineapple, so consider leaving a little of the pulpy core intact when you consume the fruit.

Boswellia — Also known as boswellin or "Indian frankincense," this herb contains powerful anti-

inflammatory properties, which have been prized for thousands of years.

Curcumin — This is the primary therapeutic compound in turmeric. Curcumin has been shown in multiple studies to have potent anti-inflammatory activity, as well as demonstrating the ability in four studies to reduce Tylenol-associated adverse health effects.[25]

Ginger — An anti-inflammatory herb offering pain relief and stomach-settling properties. Fresh ginger works well steeped in boiling water as a tea or grated into vegetable juice.

Astaxanthin — One of the most effective oil-soluble antioxidants known, astaxanthin has very potent anti-inflammatory properties. Higher doses are typically required and one may need 8 milligrams or more per day to achieve this benefit.

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